

Notice of Allowability

Application No.

10/501,008

Examiner

John Chavis

Applicant(s)

BULUSU, GOPI KUMAR

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers filed 7/8/04.
2. ☒ The allowed claim(s) is/are 1 and 2.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

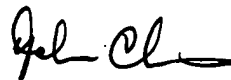
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

7. ☒ The drawings submitted 7/8/04 have been approved by the examiner.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>7/8/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


JOHN CHAVIS
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application claims have been amended as follows to correct minor typographical errors:

1. (Currently Amended) A method of implementing in a portable manner, fixed-width data types where such fixed-width data types are not directly supported by a programming[**:**] language, said method comprising the steps of: a) providing as inputs (i) a set U of required fixed-width data types that have to be implemented in which each fixed-width data type $U_{\text{sub}.k}$ from the set U has a fixed-data type width of $WU_{\text{sub}.k}$; (ii) an ordered set B of basic data types that are directly supported by the said programming language, in which each basic data type $B_{\text{sub}.i}$ from the set B has a data type width $WB_{\text{sub}.i}$ and each data type width $WB_{\text{sub}.i+1}$ is greater than or equal to data type width $WB_{\text{sub}.i}$; and (iii) a set V having all possible data type widths $WV_{\text{sub}.j}$ for every basic data type $B_{\text{sub}.i}$ from the set B of basic data types; b) creating a generic data type G with two formal parameters consisting of an integer parameter and a data type parameter; c) for every combination of data type width $WV_{\text{sub}.j}$ from the set V , and basic data type $B_{\text{sub}.i}$ from the set B creating a specialized generic data type $G_{\text{sub}.ji}$ having an integer parameter WV_j and a data type parameter $B_{\text{sub}.i}$ and providing a possible implementation within the specialized generic data types $G_{\text{sub}.ji}$

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for each required fixed-width data type $U_{sub.k}$ from the set U by comparing the data type width $WV_{sub.j}$ with data type width $WU_{sub.k}$ for every required fixed width data types $U_{sub.k}$ from the set U ; d)[.](i) if data type width $WV_{sub.j}$ is equal to the data type width $WU_{sub.k}$, implementing the required fixed-width data type $U_{sub.k}$ by creating and mapping data type $U_{sub.k}$ to data type $B_{sub.i}$; (ii) if data type width $WV_{sub.j}$ is greater than the data type width $WU_{sub.k}$, implementing the required fixed-width data type $U_{sub.k}$ by using a sub-range of basic data type $B_{sub.i}$; (iii) if data type width $WV_{sub.j}$ is lesser than the data type width $WU_{sub.k}$ and if $B_{sub.i}$ is not the last basic data type from the set B , implementing the required fixed-width data type $U_{sub.k}$ by mapping $U_{sub.k}$ to the implementation of $U_{sub.k}$ provided by the specialized generic data type G having the integer parameter $WB_{sub.i+1}$ and the data type parameter $B_{sub.i+1}$; and (iv) if data type width $WV_{sub.j}$ is lesser than the data type width $WU_{sub.k}$ and if $B_{sub.i}$ is the last basic data type from set B , implementing the required fixed-width data type $U_{sub.k}$ by using an array with the least required number of elements of basic data type $B_{sub.i}$ or a record with least required number of fields of basic data type $B_{sub.i}$; and e) finally implementing the set U of required fixed-width data types $U_{sub.k}$ by selecting from the above possible implementations a correct implementation for each required fixed data type $U_{sub.k}$ of the set U of required fixed-width data types, by creating and mapping the required fixed-width data type $U_{sub.k}$ to the implementation of $U_{sub.k}$ provided by the specialized generic data type G having the integer parameter $WB_{sub.i}$ and the data type parameter $B_{sub.1}$ wherein i, j, k and n are all positive integers.

2. (Currently Amended) A method of implementing in a portable manner, fixed-width data types where such fixed-width data types are not directly supported by a programming language, said method comprising the steps of: a) providing as inputs (i) a set U of required fixed-width data types that have to be implemented in which each fixed-width data type $U_{\text{sub}.k}$ from the set U has a fixed data type width of $WU_{\text{sub}.k}$; (ii) an ordered set B of basic data types that are directly supported by the said programming language, in which each basic data type $B_{\text{sub}.i}$ from the set B has a data type width $WB_{\text{sub}.i}$ and each data type width $WB_{\text{sub}.i+1}$ is greater than or equal to data type width $WB_{\text{sub}.i}$; and (iii) a set V having all possible data type widths $WV_{\text{sub}.j}$ for every basic data type $B_{\text{sub}.i}$ from the set B of basic data types; b) creating a generic data type G with two formal parameters consisting of an integer parameter and a data type parameter; c) for every combination of data type width $WV_{\text{sub}.j}$ from the set V , and basic data type $B_{\text{sub}.i}$ from the set B creating a specialized generic data type $G_{\text{sub}.ji}$ having an integer parameter WV_j and a data type parameter $B_{\text{sub}.i}$ and providing a possible implementation within the specialized generic data types $G_{\text{sub}.ji}$ for each required fixed-width data type $U_{\text{sub}.k}$ from the set U by comparing the data type width $WV_{\text{sub}.j}$, with data type width $WU_{\text{sub}.k}$ for every required fixed-width data types $U_{\text{sub}.k}$ from the set U ; d) [(i) if data type width $WV_{\text{sub}.j}$ is equal to the data type width $WU_{\text{sub}.k}$, implementing the required fixed-width data type $U_{\text{sub}.k}$ by creating and mapping data type $U_{\text{sub}.k}$ to data type $B_{\text{sub}.i}$; (ii) if data type width $WV_{\text{sub}.j}$ is greater than the data type width $WU_{\text{sub}.k}$, and if $B_{\text{sub}.i}$ is not the first basic data type

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from the set B, implementing the required fixed-width data type $U_{sub.k}$ by creating and mapping the required fixed-width data type $U_{sub.k}$ to the implementation of $U_{sub.k}$ provided by the specialised generic data type G having the integer parameter $WB_{sub.i-1}$ and the data type parameter $B_{sub.i-1}$; (iii) if data type width $WV_{sub.j}$ is greater than the data type width $WU_{sub.k}$ and if $B_{sub.i}$ is the first basic data type form the set B, implementing the required fixed width data type $U_{sub.k}$ by using a sub-range of basic data type $B_{sub.i}$; and (iv) if data type width $WV_{sub.j}$ is lesser than the data type width $WU_{sub.k}$, implementing the required fixed-width data type $U_{sub.k}$ by using an array, with the least required number of elements of basic data type $B_{sub.i}$ or a record, with least required number of fields of basic data type $B_{sub.i}$; and finally implementing the set U of required fixed-width data types $U_{sub.k}$ by selecting from the above possible implementations a correct implementation for each required fixed-width data type $U_{sub.k}$ from the set U of required fixed-width data types, by creating and mapping the required fixed-width data type $U_{sub.k}$ to the implementation of $U_{sub.k}$ provided by the specialized generic data type G having integer parameter $WB_{sub.n}$ and the data type parameter $B_{sub.n}$, where $B_{sub.n}$ being the last basic data type from the set B of basic data types; wherein i, j, k and n are all positive integers.

Reason for Allowance

2. The following is an examiner's statement of reasons for allowance: the closest prior art reference of record does not teach or suggest the features of step c) for every combination of data type width $WV_{sub.j}$ from the set V, and basic data type $B_{sub.i}$

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from the set B creating a specialized generic data type $G_{sub.ji}$ having an integer parameter WV_j and a data type parameter $B_{sub.i}$ and providing a possible implementation within the specialized generic data types $G_{sub.ji}$ for each required fixed-width data type $U_{sub.k}$ from the set U by comparing the data type width $WV_{sub.j}$ with data type width $WU_{sub.k}$ for every required fixed width data types $U_{sub.k}$ from the set U.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (571) 272-3720. The examiner can normally be reached on M-F, 9:00am-5:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jc

A handwritten signature in black ink, appearing to read 'Jc' followed by a stylized flourish.

John Chavis
Primary Examiner AU-2193